Health Science Education
Forensic Science
Course Code #5514

1 Credit

School Year_____

Term:_____**Fall**_____**Spring**

Rate each student on the following

3 – Mastered (Can work independently with no supervision)

2 – Require supervision (Can perform with limited supervision)

1 – Not mastered (Requires instructions and close supervision)

N – No exposure (No experience or knowledge in this area)

Student:_____Grade_____

Teacher:_____School_____

Number of Competencies in Course: **38**

Number of Competencies Mastered:

Percent of Competencies Mastered:

Standard 1.0 Students will know and apply the academic subject matter required to understand the history and development of the field of forensic science.

*One of these columns must be checked

Learning Expectations	Check the appropriate Mastery or Non-Mastery column*	Rating (Circle one)				Mastery	Non-Mastery
1.1	Demonstrate proficiency in the definition and history of forensic science.	3	2	1	N		
1.2	Examine the timeline and significant players in the field of forensic science.	3	2	1	N		
1.3	Investigate the evolution of the crime lab from initial tests to modern instruments.	3	2	1	N		
1.4	Demonstrate proficiency in the history and evolution of techniques from basis to more complex.	3	2	1	N		
1.5	Demonstrate proficiency in understanding the steps and positions involved in modern forensic science (such as criminal science, lab analysis, and courtroom testimony).	3	2	1	N		

Standard 2.0 The students will apply information gained about DNA, its structure and role in heredity to forensic science.

*One of these columns must be checked

Learning Expectations	Check the appropriate Mastery or Non-Mastery column*	Rating (Circle one)				Mastery	Non-Mastery
2.1	Describe the two different functions of DNA.	3	2	1	N		
2.2	Illustrate how the structure of DNA relates to these functions.	3	2	1	N		
2.3	Outline the stages involved in transcription and translation.	3	2	1	N		
2.4	Describe the role of DNA in heredity.	3	2	1	N		
2.5	Demonstrate proficiency in DNA techniques fundamental to forensic science: DNA isolation, restriction digestion and gel electrophoresis.	3	2	1	N		

Standard 3.0 The students will demonstrate proficiency in understanding of the science behind forensic identification of individuals, including facial recognition software, DNA markers, fingerprints and other unique human features.

*One of these columns must be checked

Learning Expectations	Check the appropriate Mastery or Non-Mastery column*	Rating (Circle one)				Mastery	Non-Mastery
3.1	Compare various methods used to identify human remains.	3	2	1	N		
3.2	Demonstrate proficiency in the use of search data bases.	3	2	1	N		
3.3	Demonstrate proficiency in analyzing fingerprints.	3	2	1	N		
3.4	Demonstrate proficiency in understanding key facial features used in facial recognition software.	3	2	1	N		
3.5	Demonstrate proficiency in reading dental records.	3	2	1	N		

Standard 4.0 The students will compare the analysis of high profile drugs and how they influence human physiology.

*One of these columns must be checked

Learning Expectations	Check the appropriate Mastery or Non-Mastery column*	Rating (Circle one)				Mastery	Non-Mastery
4.1	Be proficient in understanding the biological response that occurs in the presence of certain illegal substances and high profile drugs (such as cocaine, LSD and ecstasy).	3	2	1	N		
4.2	Examine the emotional and financial impact of illegal substances on society and law enforcement.	3	2	1	N		
4.3	Examine methods used to identify high profile drugs at crime scenes and in blood samples.	3	2	1	N		

Standard 5.0 The student will be aware of procedures for collecting, preserving, and securing forensic samples at the crime scene and in the laboratory.

*One of these columns must be checked

Learning Expectations	Check the appropriate Mastery or Non-Mastery column*	Rating (Circle one)				Mastery	Non-Mastery
5.1	Be proficient in the terminology and basic procedures for preserving crime scenes, including recognizing, recording, collecting, labeling and storing evidence.	3	2	1	N		
5.2	Analyze methods for securing, searching, documenting, and collecting different types of samples (blood, fingerprints, tracks, and other evidence).	3	2	1	N		
5.3	Be proficient in the basic procedures for securing the crime scene.	3	2	1	N		

Standard 6.0 The students will demonstrate proficiency in understanding the proper methods and instruments used in the modern crime laboratory to analyze forensic samples.

*One of these columns must be checked

Learning Expectations	Check the appropriate Mastery or Non-Mastery column*	Rating (Circle one)				Mastery	Non-Mastery
6.1	Become proficient in understanding the basic principles behind the following scientific instruments used in forensic science: Gas-Chromatography, Capillary Electrophoresis, Polymerase Chain Reaction, Scanning Electron Microscope and crime site imager.	3	2	1	N		
6.2	Become proficient in knowing when to use the proper instrument.	3	2	1	N		
6.3	Match methods and instruments with the proper forensic evidence, data and outcome.	3	2	1	N		
6.4	Evaluate the results from basic forensic data.	3	2	1	N		

Standard 7.0 Students will interpret their understanding of the legal aspects of forensic science, its application in the judicial system and apply this knowledge to societal issues.

*One of these columns must be checked

Learning Expectations	Check the appropriate Mastery or Non-Mastery column*	Rating (Circle one)				Mastery	Non-Mastery
7.1	Determine the legal requirement to obtain a search warrant.	3	2	1	N		
7.2	Use language appropriate to the legal aspects of forensic science.	3	2	1	N		
7.3	Use language appropriate to interviewing both crime scene witnesses and scientific expert witnesses.	3	2	1	N		
7.4	Evaluate different methods that evidence is obtained and legal protections are guaranteed by the constitution.	3	2	1	N		
7.5	Examine a criminal case study in which legal procedures were not followed properly. Identify what was done incorrectly and how this changed the outcome.	3	2	1	N		

Standard 8.0 The student will be aware of OSHA regulations, proper attire at the crime scene and in the forensic laboratory and safety guidelines that apply to biohazardous waste.

*One of these columns must be checked

Learning Expectations	Check the appropriate Mastery or Non-Mastery column*	Rating (Circle one)				Mastery	Non-Mastery
8.1	Orally report on universal precautions, its history, and how these precautions differ from those used in medical settings.	3	2	1	N		
8.2	Analyze OSHA guideline that must be followed in forensic science.	3	2	1	N		
8.3	Research safety guidelines that apply to biohazardous waste.	3	2	1	N		
8.4	Research sources of biohazardous waste in forensic science.	3	2	1	N		

Standard 9.0 Students will examine the range of careers available in the forensic science and related fields. Careers such as forensic anthropology, entomology, pathology, nursing, district attorney, and police work.

*One of these columns must be checked

Learning Expectations	Check the appropriate Mastery or Non-Mastery column*	Rating (Circle one)				Mastery	Non-Mastery
9.1	Read, interpret, verbalize, and apply policies and procedures appropriate to a forensic setting.	3	2	1	N		
9.2	Participate in an orientation prior to a research setting.	3	2	1	N		
9.3	Utilize proper communication, critical thinking and problem-solving techniques.	3	2	1	N		
9.4	Research careers in forensic science.	3	2	1	N		

Additional Comments_____